DOCUMENT RESUME

ED 362 757 CE 064 862

TITLE	Health Promotion for Adult Literacy Students: An Empowering Approach. Introduction to the Series.
INSTITUTION	Hudson River Center for Program Development, Glenmont, NY.
SPONS AGENCY	New York State Education Dept., Albany. Bureau of Continuing Education Program Development.
PUB DATE	[93]
NOTE	24p.; For other documents in this series, see CE 064 863-868.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Adult Basic Education; *Adult Literacy; *Classroom Techniques; *Health Education; *Health Materials; *Health Promotion; Literacy Education; Teaching Methods
IDENTIFIERS	Empowerment

ABSTRACT

This teaching guide introduces and gives advice on using a series of health promotion materials in adult basic education classes. The series was developed with input from adult learners. This guide describes the series and offers advice on staff preparation and suggestions for lesson preparation. The guide is organized in six sections that cover the following topics: description of the series, goals and objectives, staff preparation, lesson preparation, considerations in preparing instructional materials, and additional reading (abstracts of 21 suggested readings). Three appendixes include a health issues survey and acknowledgements of persons who helped in the development of the materials and others who were involved in the project. (KC)

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HEALTH PROMOTION FOR ADULT LITERACY STUDENTS

An Empowering Approach.

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HEALTH PROMOTION FOR ADULT LITERACY STUDENTS

An Empowering Approach

Introduction to the Series

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The State Education Department
Office of Workforce Preparation and Continuing Education
Albany, New York 12230

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INTRODUCTION TO THE SERIES

The information and skills presented in this series are based on the most current information, research, and recommendations of reliable sources. The New York State Education Department, the Hudson River Center for Program Devlopment, Inc., and the authors, however, make no guarantee as to the correctness or completeness of such information that may be required under certain circumstances, and assume no responsibility therefore.

Further, it is recommended that students follow specified protocol given by recognized professionals when a difference is found with material in this publication and procedures obtained elsewhere.

Acknowledgment

I would like to thank all who contributed to the production of this guide. Carol Jabonaski and Cynthia Laks encouraged us and suggested refinements. Teachers and students from adult literacy programs reviewed the guide and provided good suggestions for improvement. Barbara Smith and Colleen Bodane were very generous with their time and helpful with constructive comments. Appreciation goes to Nancy Klepsch for producing excellent scripts for the audiotapes. Finally, my thanks is also extended to the Centers for Disease Control and Prevention for their selected annotations as found in *Literacy and Health in the United States* (March 1991), items of which are reprinted in this document.

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(Funds Provided by:The University of the State of New York, The State Education Department, Office of Workforce Preparation and Continuing Education under Section 353 of the Adult Education Act)

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INTRODUCTION TO THE SERIES

INTRODUCTION

As an educator of adult learners, you are committed to improving your students' lives by improving their writing, reading, arithmetic, and language skills. Your efforts are not limited to this scholarly realm, however. More often than not, an adult learner's ability to learn is hampered by more basic demands: job, illness, family responsibilities, and activities of daily life. Consequently, your students may turn to you for assistance with these areas as well.

Input from adult students who participated in focus groups convened across the state confirmed that they are indeed eager to learn skills that will enable them to manage their responsibilities to family, to friends, to the workplace, and, equally as important, to themselves. In response to this demand, this series of instructional guides was developed to incorporate practical, "real-life" information into the learning process. *Health Promotion for Adult Literacy Students: An Empowering Approach* focuses on health, which is essential to day-to-day living, as well as to effective learning.

Students were asked to complete an informal survey on their interest in topics ranging from diet and nutrition to substance abuse to family planning. (See Appendix A for a copy of the survey and its results.) The results were tallied based on frequency of response, and the most popular topics were included as components of this curriculum.

Interest in health issues is not of complete surprise when you consider several factors. The adult literacy student's health status is more fragile and in more need of attention than that of the general population. Low levels of basic skills are strongly associated with low-paying employment and lack of related benefits such as health insurance coverage. Limited funds combined with lack of health insurance result in a negative impact upon health status. Furthermore, most adult literacy students have not completed high school, thereby foregoing health education courses.

Therefore, the adult literacy program is an ideal place to introduce health promotion and disease prevention strategies. This health education series will assist you in this process. Health promotion activities are incorporated into lessons that teach and reinforce reading, writing, arithmetic, and language skills. This series will save you valuable planning time, since each component includes background information, sample lessons, and additional resources in one easily accessible package.

This package is actually a structured supplement to the expertise and knowledge about positive health behaviors that both you and your students currently possess. Taking advantage of all of these resources will promote the positive, caring environment in which optimum learning occurs. Turn now to the following pages for a complete description of the package, advice on staff preparation, and suggestions for lesson preparation.

DESCRIPTION

Health Promotion for Adult Literacy Students: An Empowering Approach is a total health curriculum designed specifically for students of adult basic education (ABE), high school equivalency (HSE), and English as a second language (ESL). The package is composed of a series of teacher guides, accompanied by student workbooks and audiocassettes, focusing on various health topics.

Teacher's Guide The teacher's guide is designed to provide all the information necessary for effective instruction. Each teacher's guide includes Background Information, Sample Lessons, and Glossary.

Student Workbook The student workbook presents exercises and activities to be used in conjunction with teacher instruction or with audiocassette instruction.

Audiocassette The audiocassette presents instruction at an appropriate and reasonable rate of speed for compatibility with individual student work.

GOALS AND OBJECTIVES

The goal of this health series is to provide adult students with information about major health issues and positive health behaviors which will empower them to substantially promote wellness and reduce disease and accidents.

Upon completion of each topic of instruction, students will be able to:

1. Understand the fundamentals of the featured topic and its relationship to wellness.
2. Describe prevention techniques.
3. Recognize any physical, psychological, and/or emotional ramifications of the featured topic on self.
4. Foster appropriate wellness promoting habits in family members, friends, and coworkers.
5. Utilize community resources that provide assistance and information on the featured topic.

STAFF PREPARATION

Since ABE, HSE, and ESL classes vary in size and organization, curricula for this population must address different needs. Consequently, this series was designed to be used in a multitude of ways. The adult literacy teacher can instruct a group of students using the information. Or, by referring to the resources and content ideas in the teacher's guides, an adult educator can tailor sample lessons to specific populations.

Individualized instruction is also possible with this curriculum. A student whose schedule does not allow for attendance to organized instruction can learn by listening to the instruction on the audiocassette, and by completing the activities in the workbook. The instructor can intervene in the self-instructional format as needed: such as when a student requires a bit more assistance in mastering a particular objective.

Staff Assessment

The first step in helping the staff prepare for implementing a health curriculum into their classroom is to ask them what they feel they need to know about the issues. The staff needs will become your outcome objectives for staff training. If your staff meetings are small enough for comfortable discussion, try the assessment there. As an alternative, individual interviews can also be used, but they will consume more time.

Staff Training

In acknowledgment of busy schedules, very little staff training is necessary to incorporate this health series into actual instruction. However, it is necessary that the persons providing instruction about health issues are knowledgeable about and comfortable with the material. Teachers who are uncomfortable or unsure about either the cognitive or affective aspects of the featured topic should not attempt to teach it. There are many resource people available in most communities to help present information or facilitate a lesson.

Staff training should include:

1) A thorough review of this Introduction to the Series to provide a base of knowledge of why it is important to include health information in instruction, how to use the series, and what resistance to expect from your students.

2) A thorough review of the guides for each featured topic to provide background knowledge of the topic. To maximize comfort with a subject that may be sensitive, e.g., personal hygiene or birth control, it may be desirable to participate in additional staff development activities before initiating instruction.

At a *minimum*, users of this series should review the information for:

- applicability of content to the targeted population;
- appropriateness of language skills to the targeted population;
- suitability for learning styles of targeted population.

LESSON PREPARATION

The components of *Health Promotion for Adult Literacy Students: An Empowering Approach* can be used individually. It is not necessary for you to cover every topic in the series, especially if your class is not interested. Nor is it necessary for you to follow the series in a particular order. Each topic is a stand-alone instructional unit, complete with teacher's guide, student workbook, and audiocassette tape. Because the material provided for each topic is presented in a consistent format, incorporating this health instruction will be relatively "surprise-free."

The teacher's guide for each component of this series contains several types of information to help you get started with your health curriculum. Two items in the guides are included primarily to provide instructors with relevant information about the featured health topic. There is a chapter of background information on the topic, which is included primarily to increase instructors' comfort level with and knowledge of the subject matter. While instructors would not be expected to present all of this information to students, they may want to reproduce selected portions of the outline and hand them out to their students. A glossary is also included to give instructors a handy source for definitions of terms that may emerge during class discussions.

Four or five sample lessons are also included for each topic. The intent of the sample lessons is not to present information so students can be tested on it. Rather, these lessons focus on outcomes related to empowering students to recognize and understand the correlation between their behaviors and/or attitudes and their health. Abandoning risky health behaviors in favor of more positive ones requires taking little steps in a safe environment, as well as much practice in the daily world.

Each guide also contains lists of resources you can investigate as you develop your health curriculum for your students. These resources include videos, pamphlets and brochures, books, and magazine articles.

As you begin introducing the health curriculum to your students, you may decide that it would be advantageous to have all lessons prepared ahead of time. Below is a suggested format you may wish to use for preparing lessons. Feel free to adapt it or use your own. It consists of the following:

Goal: State in general terms what is to be accomplished in the lesson.

Outcome Objectives: State in behavioral, measurable terms what is to be achieved in the lesson.

Instructional Materials: Materials to be used in this particular lesson including sufficient pamphlets, name of videotape and equipment, and where to find them.

Activities: Includes a brief description of each activity.

Slight modifications facilitate the use of the above format for preparing individualized instruction. Students who are unable to attend regularly scheduled classes are not denied health information. An integral part of this series is an audiocassette tape and student workbook to be used at the student's convenience.

The scripts for the audiotapes were taken directly from the background information found in each of the teacher's guides. To reinforce the instruction on the audiotapes, and to heighten student involvement, the narrator of the tapes pauses at appropriate intervals for students to complete the corresponding activities in the workbook.

Although students can essentially learn from the audiotape rather than from the instructor, it is necessary and important for the instructor to become involved in the learning process. Instructor and student should initially sit down together to review how the program works, and then meet periodically to discuss progress, concerns, and problems. The instructor may also want to review the student's workbook to ensure that the objectives are being met.

CONSIDERATIONS IN PREPARING INSTRUCTIONAL MATERIALS

Whether you prepare the lessons yourself or have someone else do them, here are some tips which should prove helpful.

Since you already identified the learner outcomes, you can choose and organize the appropriate content from the background information outlined in each guide. The material should be prepared and presented in a way which will make it interesting and relevant to students. The fact that many of the students are responsible for the care of others will make it easier to personally involve them and thus make the instruction more meaningful.

Please also note that instructional materials should be nonthreatening and positive. Certain health issues may be very frightening or too personal for the students to discuss in the classroom. You may also encounter resistance from students who think they already know the material, and don't want to waste their valuable time on material that does not contribute to the attainment of their GED. Acknowledge your student's fears and concerns. Be prepared to explain to them that these activities will improve their reading and writing skills at the same time that they are learning important life-enhancing facts. Encourage your students to contribute their expertise on any of the featured topics.

Part of personalizing the curriculum to meet the needs of your program is making certain that the material is culturally relevant. For example, different cultures have very different values about family, sexuality issues, male and female roles, health care, and individual and group behaviors. People from the different cultures in your program should be consulted in the development of instructional materials to assure cultural relevancy.

Several points should be taken into consideration regarding written materials to be handed out to students.

- Check the readability carefully. While it is consistent with the highest principles of adult education to have students use prepared materials, much of it is written at a very high reading level. A recent review of 16 educational brochures found that the average reading level was 14th grade, with a range from 9th grade to 17th grade level. So look over the material you plan to use and make sure that students have the reading skills to understand it.
- Messages about health need to be direct, short, and specific. Information must be broken down into basic points with supporting information.
- Visual cues will be helpful to clarify and interpret words. Appropriate pictures, illustrations, and graphics must work in conjunction with words.
- The University of New England offers a program on low literacy communication skills, which may be of use to anyone developing health-related materials for low-literacy populations. For additional information, contact the *Literacy and Health Promotion Program*, College of Osteopathic Medicine, Hills Beach Road, Biddeford, ME 04005, (207) 283-0171 x 205.

ADDITIONAL READING

Before you introduce this exciting new series into your classroom, you might wish to expand your own background information. You may find the following list of readings helpful.

Compliance, Low Literacy, and Locus of Control.
Hussey, L.C. Gilliland, K. *Nursing Clinics of North America*. 24(3):605-611, September 1989.

Compliance, defined as the extent to which a person's behavior coincides with medical health advice, remains a critical, complex issue in health care today. Many interrelated factors affect levels of compliance and noncompliance. Seven factors have been found to affect compliance positively: (1) patient compliance with other aspects of the regimen, (2) whether the patient is receiving other treatments for the same condition, (3) family influence, (4) family stability, (5) the patient's perception of his own susceptibility to the disease, (6) the patient's perception of the disease as serious, and (7) the efficacy of therapy. Three factors found to have a negative effect on compliance involve the duration of therapy, the number of concurrent drugs or treatments, and side effects. The failure to adhere to medical treatment, whether intentionally or unintentionally, is called noncompliance. Low literacy and illiteracy are major contributing factors to noncompliance. People with low literacy skills may not realize what information the health care professional needs to know for a history and physical or nursing assessment. In addition, a person who is functionally illiterate may not be able to act on content after reading it. Locus of control, a behavioral concept, concerns how a person perceives his ability to influence or control his life. Research suggests that internally oriented individuals are more likely to be health oriented and desire physical well-being and are more likely to comply with recommended health regimens. By assessing literacy and locus of control, the health care professional can identify persons less likely to comply with medical treatment. 20 references.

Functional Illiteracy in Today's Work Force.
Koen, S.L. *Business and Health*. 5(3):18-23, January 1988.

The literacy crisis among members of the baby boom generation (persons born between 1946 and 1964) has important implications for business and industry. More and more employers are reporting that the majority of their employees with high school diplomas have major deficiencies in reading, writing, mathematics, and basic cognitive processing skills. Two major studies, the Adult Performance Level (APL) study of 1975 and the National Assessment of Educational Progress study of 1985, reveal that the literacy capabilities of a high proportion of baby boomers are inadequate for daily living and the demands of the workplace. In the health area, specifically, the APL study assessed 13 objectives for functional competence and found insufficient reading skill levels among 52 percent of the study sample. This finding has important implications for health care decision making, employee health promotion programs, and workplace safety and liability. To improve the health, safety, and productivity of its work force, American business will have to introduce targeted and effective workplace literacy programs. Two companies, the Polaroid Corporation and Aetna Life and Casualty Company, have developed model programs in workplace literacy development.

Literacy and Health.
Kappel, B. *Ontario Medical Review*. 55(3):42-43, March 1988.

Millions of people are unable to receive and understand information related to health because they do not meet the literacy demands of today's society. Far ranging implications and risks include not understanding directions on medications, overdose, improper use, inappropriate use, not understanding labels in grocery stores and drug stores, not having access to thousands of brochures and pamphlets related to health care and healthy living, not understanding health and safety warnings, and not understanding instructions for handling chemicals and machinery. Adults who do not understand information are at risk. A great deal of information, including instructions, booklets, and

pamphlets, packaging and labeling, warnings, and print media is written in such a way as to be inaccessible to millions of people. Altering the style and content of materials will not solve the problem. Strategies must be developed to ensure that when information is given, the receiver of that information understands. People who are learning to read do not always learn to read and understand messages that are critical to their health and safety. Strategies must be developed to ensure that literacy programs help learners identify critical messages and learn to understand them.

Literacy and Health: Making the Connection.
Perrin, B. *Health Promotion.* 28(1):2-5, Summer 1989.

As part of the Literacy and Health Project, the Ontario Public Health Association conducted a study on the connection between illiteracy and health. The study emphasized three elements: (1) limited literacy skills as a cause of poorer health; (2) the obtaining of information about health, the appropriateness of existing health and medical services, and the awareness of health and medical workers to health problems associated with illiteracy; and (3) potential solutions to these problems. The researchers acquired information on illiteracy through a comprehensive literature review, a letter of invitation to public health units to share what they knew abut health problems associated with literacy, case studies with health and literacy groups, and selected key informant interviews. The study revealed that poor health can be directly linked to limited reading skills. Making the World Healthier and Safer for People Who Can't Read is an action plan that has been designed using the results of the study. 6 references.

Communicating Nutrition Information to Low-literate Individuals: An Assessment of Methods. Revised Final Report.
Mettger, W. Chicago, IL, *American Public Health Association, One Hundred Seventeenth Annual Meeting*, 22 p., October 22-26, 1989.

Available from: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute, Office of Cancer Communications, Bethesda, MD 20892.

Funded by: National Cancer Institute, Office of Cancer Communication.

The objectives of the Working With Low-literate Populations study, designed to gather information on the experiences of public health nutritionists working with low-literate clients, were (1) to assess the effectiveness of visual, written, and auditory tools for communicating nutrition information to low-literate individuals, and (2) to identify successful and unsuccessful methods used by public health nutritionists to communicate nutrition information. The study operationally defined low literacy as possession of less than a high school education to allow researchers to select states for participation in the study that have high percentages of adults with less than a high school education. The eight states selected were Alabama, Arkansas, Kentucky, Maine, Maryland, Mississippi, North Carolina, and South Carolina. Researchers asked directors of public health nutrition in these states to submit the names and addresses of all public health nutritionists in their state. The researchers then sent questionnaires to 400 public health nutritionists with a response rate of 50 percent (n = 202). Questionnaire instructions requested that respondents use their organization's definition of low literacy when determining the percentage of low-literate clients that they saw. Findings indicated that the most effective means of communication were food models, television, and videos. Posters, verbal explanations, and slides had very similar average effectiveness ratings. The public health nutritionists rated pamphlets and audiotapes as the least effective methods of communication. Photographs, bright colors, and bold graphics were rated as the most effective visual element for communicating nutrition information. The information will help the National Cancer Institute (NCL) to develop nutrition education tools and materials for English-speaking, low-literate adults.

Criteria for the Selection and Use of Health Education Reading Materials.

Robinson, J. *Health Education*. 19(4):31-34, August/September 1988.

Printed materials are an important part of most health education programs and health educators should select them carefully. They need to consider the abilities of the target audience and to ensure that the materials can be used. A number of variables influence the selection of written materials for use in health education. Reading level is an obvious first consideration. Health educators in schools have the help of other educators in choosing appropriate reading levels; community health educators are less fortunate but can rely on several readability formulas, notably the Flesch formula, which measures readability to the fifth grade level, and Fry formula, which determines readability to the first grade level. Even though the reading level is appropriate, there is no assurance that the reader will comprehend the materials. It is important that the health educator choose materials within the cognitive abilities of readers with respect to their previous experience and vocabulary. Motivation and cultural factors also affect comprehension. The health educator must know as much as possible about the readers before selecting printed materials for health education programs. 8 references.

Educational Materials for Low Literate Populations: A Methodology for Design, Use and Evaluation.

Rice, M. & Valdivia, L. Washington, DC. *Pan American Health Organization*. 11 p., 1990.

Available from: Pan American Health Organization, 525 23rd Street, NW., Washington, DC 20037. (202) 861-3200.

The Pan American Health Organization (PAHO) has developed a methodology for designing, using, and evaluating health education materials. Based on a methodology developed in Spanish for use in Latin American countries, the English language version of the methodology observes five basic operating principles. (1) The community perspective in the design and use of health education materials must be reflected in at least three aspects: respect for cultural values and traditions, relevance to community needs and interests, and participation of the community in the preparation and use of the materials. (2) The materials must be an integral part of a health education program, not considered the health program in and of itself. Educational objectives should be based upon well-defined educational programs that contain several elements and strategies, only one of which is educational materials. (3) Educational materials must coincide with the health care services that are available. The fact that materials are part of an educational program also means that they must be mutually reinforcing and complementary. (4) Materials must be pretested for their effectiveness in communicating the intended health message. (5) Materials must be distributed with instructions on how, when, and with whom they should be used. PAHO developed a list of general and specific criteria for the methodology for evaluation of the quality and potential efficacy of educational materials. The evaluation scale provides a point system to evaluate materials that have been designed elsewhere and to help health personnel decide if the materials would be appropriate with their target audiences. The scale also promotes self evaluation by the community in the development of its own materials.

Evaluating Printed Materials.

Allensworth, D.D. & Luther, C.R. *Nurse Educator*. 11(2):18-22, March/April 1986.

Health education literature should be carefully chosen because of its important role in the delivery of health messages. Factors to consider in choosing health care literature include (1) readability, (2) motivational appeal, (3) legibility, (4) learnability, and (5) usability. Readability tests are important, and should be used, but it must be recognized that they do not measure all the necessary parameters needed to determine the true comprehensiveness level of a particular piece of literature. Legibility refers to readability and comprehension. Type style and size, the elimination of page glare, and page design should all be considered. It is suggested that motivating the reader to read a particular piece of literature can be enhanced by personalizing the piece, taking into account cultural, racial, and sexual differences, and avoiding stereotypical poses and occupational roles. Organizing the material so that

important points are reinforced, liberal use of ionic aids, frequent summaries, and thought provoking questions can be used to enhance learnability. The material should be reviewed to determine its appropriateness for the target group intended. An evaluation checklist can be used to determine the literature's readability and comprehensibility to a targeted group. 1 table, 13 references.

Guidelines: Writing for Adults With Limited Reading Skills.

US Department of Agriculture, Food and Nutrition Service, Office of Information.

Washington, DC, US Department of Agriculture, 23 p., February 1988.

Available from: Food and Nutrition Information Center, NAL, Room 304, 10301 Baltimore Boulevard, Beltsville, MD 20705. (301) 344-3719.

Guidelines: Writing for Adults With Limited Reading Skills provides instructions to help writers prepare materials for adults with limited reading skills. The manual is directed both to writers and editors who have never written for low-literacy audiences or who want to sharpen their skills and to persons not trained as writers and editors but whose responsibilities require preparation of such materials. The manual addresses basic points in preparing informational material including knowing your audience, deciding on and organizing your message, writing your message, using illustrations to support the message, formatting to get attention, and pretesting before production. The manual also provides a checklist for written material helpful in reviewing final drafts.

How To Guide for Health Promotion: 5 Easy Steps!

Olson, S. Austin, TX, Texas Department of Health, Public Health Promotion Division, 46 p., 1985.

Available from: Texas Department of Health, Public Health Promotion Division, 1100 West 49th Street, Austin, TX 78756. (512) 458-7405.

The How To Guide for Health Promotion: 5 Easy Steps!, developed by the Public Health Promotion Division of the Texas State Department of Health, assists staff of local and regional health departments in planning health promotion activities. The manual is a reference guide for the experienced health educator, or a step by step self-learning module for those without training but with health promotion responsibilities. The guide covers five basic steps: problem identification, educational and cultural diagnosis, planning intervention strategies, implementation and monitoring, and evaluation. Special sections cover lecture preparation, individual and group education, low literacy education, media preparation, and training methods.

Literacy and Health Project, Phase One: Making the World Healthier and Safer for People Who Can't Read.

Ontario Public Health Association. Frontier College.

Toronto, *Ontario, Canada, Ontario Public Health Association*, 61 p., 1990.

Available from: Ontario Public Health Association, 468 Queen Street, E., Suite 202, Toronto, Ontario, Canada M5A-1T7. (416) 367-3313.

The purpose for the Literacy and Health Project research study was to explore the relationships between literacy and health in Canada. The study used a variety of methods: A review of health status data from major health status surveys; a comprehensive, multidisciplinary review of the literature, considering both published and unpublished information; a brief questionnaire to health and literacy organizations across Ontario; three case studies at different sites in the province; and a number of key informant interviews. Evidence suggests that illiteracy leads to poorer health through a combination of both direct and especially indirect intervening variables. Direct impacts include incorrect use of medications, not following medical directions, errors in administration of infant formula, and safety risks, particularly at the workplace. Indirect impacts include poor life-style practices, poverty, stress and low self-esteem, dangerous work environments, lack of access to health information, and lack of use or inappropriate use of medical and health services. Three underlying themes emerge from a consideration of the direct and indirect intervening variables through which illiteracy affects health status: lack of knowledge, lack of resources, and lack of empowerment and control. Potential solutions include social policy level action, heightened awareness within the health community, working together with the community, provision of health information other than via the written word, and simplifying written information about health.

Outcome of an Osteoarthritis Education Program for Low-literacy Patients Taught By Indigenous Instructors.

Bill-Harvey, D.; Rippey, R.; Abeles, M.; Donald, M.J.; Downing, D.; Ingenito, F.; and Pfeiffer, C.A. *Patient Education and Counseling*. 13(2):133-142, April 1989.

Funded by: National Institutes of Health under Grant no. AM20621.

An interdisciplinary team, including community leaders, developed an osteoarthritis education program for low-income older adults of low literacy and a manual, written in a script format using a conversational tone at an eighth grade reading level. Ten community leaders, identified through community support systems, received 30 hours of training to conduct the program. The program targeted the economically disadvantaged elderly in an inner city neighborhood of Hartford, Connecticut, where 60 percent of adults had less than a high school education. Topic areas for the 6 weeks were (1) overview of the course, (2) exercises for problem joints, (3) self-help aids and ways to protect the joints, (4) medications, (5) pain, nerves, depression, and ways to relax, and (6) home remedies and unproven cures. The activity-centered classes included a hands-on demonstration each week. Participants completed pretests and posttests orally, using pictures and a structured questionnaire. The tests measured knowledge of the disease and self-reported function, exercise, attitude, and use of adaptive equipment. Seventy-six people, 75 percent of the original enrollees, completed the course. There was a significant increase in knowledge and improved exercise ability among the participants. Functional improvement, less easy to assess, was not statistically significant, but use of adaptive equipment increased. Attitude improved for 47 participants. The program was well-received, and participants have expressed the desire for additional classes for get-togethers.

Patient Literacy and the Readability of Smoking Education Literature.

Meade, C.C. Byrd, J.C. *American Journal of Public Health*. 79(2):204-206, February 1989. Research supported by a grant from the American Lung Association of Wisconsin.

Printed educational materials are commonly distributed to reinforce patient education and extend verbal instructions in smoking prevention and cessation programs. However, printed materials are only appropriate if they can be read and understood by their target audience. To investigate whether a disparity exists between the reading level of written education materials and the reading skills of patients, the authors compared the reading grade level of smoking education materials with the reading abilities of patients at a primary care clinic. The authors analyzed 49 samples of smoking education materials for readability using a microcomputer text analysis program that calculates six formulas of reading level estimates. Each of 258 patients indicated years of school completed and took the Wide-Range Achievement Test Level 2 (WRAT2), a measure that yields a word-recognition grade level score. Readability estimates of the booklets ranged from grade three to the scientific and professional level, with the majority of booklets written at above the ninth-grade level. Twelve of the 49 were written at the 12th-grade level or above. The reported levels of education of the subjects ranged from no schooling to college, with a median level of grade 10. Reading ability measured by the WRAT2 ranged from below grade 3 to above grade 12, with a median at grade 6. Of 90 subjects who said they had completed high school, only 45 demonstrated this level on objective testing. Health educators should create positive health messages that patients want to read, can read, and can comprehend.

Barbara Bush Foundation for Family Literacy.

Somerfield, B. (director) Community Foundation of Greater Washington, Inc.

Available from: Barbara Bush Foundation for Family Literacy, 1002 Wisconsin Avenue, NW, Washington, DC 20007. (202) 338-2006.

The mission of the Barbara Bush Foundation for Family Literacy is to establish literacy as an important value in every family in the United States, to break the intergenerational cycle of illiteracy, and to support the development of family literacy programs. Such programs are characterized by literacy and parenting education for adults, prereading and other literacy activities for children, and time for parents to use their newly acquired skills with their children. Specifically, the Foundation seeks to identify effective literacy

programs; provide seed money for community planning of interagency family literacy programs; award grants to establish intergenerational literacy efforts; support training and professional development for teachers; encourage recognition of volunteers, educators, students, and effective literacy programs; and publish materials that document literacy programs.

Blacks and High Blood Pressure.
US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, National High Blood Pressure Education Program.

Bethesda, MD, US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, National High Blood Pressure Education Program, 6 p., November 1982.

Available from: National Heart, Lung, and Blood Institute Education Programs, Information Center, 4733 Bethesda Avenue, Suite 530, Bethesda, MD 20814. (301) 951-3260.

Blacks and High Blood Pressure, a brochure produced by the National High Blood Pressure Education Program, teaches low-literate black adults about high blood pressure, and its associated risks of heart attack and stroke. The brochure discusses the prevalence of high blood pressure among blacks, the necessity for treatment, and the role of the patient's family in controlling high blood pressure. For patients with high blood pressure, the brochure stresses the importance of having regular blood pressure checks, following physician's advice and taking medication as instructed. The brochure further advocates preventive measures, such as weight control and limited salt and alcohol intake.

Blood Pressure Facts.
Florida Department of Health and Rehabilitative Services.

Tallahassee, FL, Florida Department of Health and Rehabilitative Services, 8.5 x 14 inch poster, 1989.

Available from: Florida Department of Health and Rehabilitative Services, 1317 Winewood Boulevard, Tallahassee, FL 32399-0700. (904) 488-2834.

Blood Pressure Facts, a poster produced by the Florida Department of Health and Rehabilitative Services, teaches low-literacy patients about hypertension and its associated risks of heart disease and stroke. Specifically, the poster includes numerical values of blood pressure readings for normal, high-normal, mild, moderate, and severe ranges. The poster also promotes limiting salt intake, increasing exercise, stopping smoking, losing weight, reducing alcohol intake and stress, and getting regular blood pressure checks.

Cholesterol Facts.
Florida Department of Health and Rehabilitative Services.

Tallahassee, FL, Florida Department of Health and Rehabilitative Services, 8.5 x 14 inch poster, 1987.

Available from: Florida Department of Health and Rehabilitative Services, 1317 Winewood Boulevard, Tallahassee, FL 32399-0700. (904) 488-2834.

Cholesterol Facts, a poster developed by the Florida Department of Health and Rehabilitative Services, teaches low-literacy patients about the prevention and treatment of high blood cholesterol and its associated risks of coronary heart disease and stroke. Specifically, the poster provides basic information about the origins and risks of cholesterol, and recommends nutritional steps to control cholesterol intake, such as avoiding fried foods, fatty red meats, and sandwich meats, eating more fish, beans, fruits, and vegetables, and using margarine and liquid vegetable oils. The poster also promotes learning the facts about cholesterol, visiting a doctor on a regular basis, and controlling other risk factors, such as high blood pressure, smoking, and obesity.

Good Health: It's Your Decision. Buena Salud: Esta En Sus Manos. Leader's Guide and Flip Chart.

Texas Department of Health, Public Health Promotion Division, Health Education/Risk Reduction Program. Austin, TX, Texas Department of Health, Public Health Promotion Division, Health Education/Risk Reduction Program, 31 p., May 1986.

Available from: Texas Department of Health, Public Health Promotion Division, Health Education/Risk Reduction Program, 1100 West 49th Street, Austin, TX 78756.

The *Good Health: It's Your Decision Leader's Guide* and *Flip Chart* teaches disease prevention and health risk reduction to low income, low literacy clients in public health clinics. The chart, printed in both English and Spanish, addresses those risks which are the most prevalent in this population. The topics covered include disease prevention, high blood pressure, diabetes, obesity, exercise, and cigarette smoking. The guide is designed to be used by health professionals.

Low Literacy Materials

US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, Office of Prevention, Education, and Control.

Bethesda, MD, US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, Office of Prevention, Education, and Control, February 1989.

Available from: National Institutes of Health, National Heart, Lung, and Blood Institute, Education Programs Information Center, 4733 Bethesda Avenue, Suite 530, Bethesda, MD 20814, (301) 951-3260.

Low Literacy Materials, an information packet designed by the National Heart, Lung, and Blood Institute of Office of Prevention, Education, and Control, contains materials developed as a result of the workshop *Extending the Reach of Health Agencies: A Challenge for Reaching Lower Reading Level Audiences*. The purpose of the workshop was to raise awareness about low level or absent reading skills and to consider ways to address literacy problems with creative solutions. Workshop content included facts on low literacy, a low literacy audience participation exercise, a case study, discussions on the interpersonal perspective, information on problems and approaches in communicating effectively, lectures on problems, and approaches in program development. The packet includes a summary of the discussions from the sessions with recommendations for action; a description of the programs; and samples of some of the materials which are reported to be quite effective in use. The slides are reduced photocopies of nine posters used by Arizona and New Mexico in their respective AIDS campaigns. Posters have been found to be the best method of reaching those with low or absent reading skills because they convey a simple message without being condescending.

Time of Change. De Nina a Mujer.

US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute.

Bethesda, MD, US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute, 68 p., January 1986.

Available from: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute, Office of Cancer Communications, Building 31, Room 10A16, Rockville, MD 20892, (800) 4-CANCER.

A Time of Change/De Nina a Mujer is a photonovella designed to educate young Hispanic women with limited reading ability about various health issues. The booklet promotes a variety and balance of foods, regular exercise, monthly breast self examinations, regular pelvic examinations, and Pap tests. It discourages smoking, alcohol use, and other drug use. Written in both Spanish and English, the booklet depicts conversations between Rosa and her aunt, boyfriend, and doctor about the health issues listed above. Following Rosa's story, the booklet provides a listing of organizations that offer health information, a diagram of a breast self-examination, and a detailed list of suggestions for losing weight and increasing exercise.

You and Your Medicines: Let's Talk.

National Council on Patient Information and Education.

Talk About Prescriptions Month. October 1989.

Available from: National Council on Patient Information and Education, 666 11th Street, NW., Suite 810, Washington, DC 20001.

Specially designed for adults with poor reading skills, *You and Your Medicines: Let's Talk*, a poster designed by the National Council on Patient Information and Education, provides information on prescription medicine. The poster is for distribution in pharmacies, physicians' offices, nursing stations, managed care groups, and hospital education and discharge planning programs. Health care providers are asked to give posters to all patients at the time they receive their prescriptions. Specifically, the poster encourages patients to ask health care providers about mixing drugs with certain foods and alcohol, and about appropriate drug dosages. It also suggests that patients call with questions or problems about drugs and get their prescriptions filled promptly.

APPENDIX A: HEALTH ISSUES SURVEY

	YES	NO	NO RESPONSE
What health issues are you and your family most concerned about?			
Diet/Nutrition	99	33	12
First Aid	94	22	28
Health Insurance	92	29	23
Health Care Resources	89	38	17
Exercise/Physical Fitness	89	39	16
Substance abuse (alcohol, drugs)	83	44	17
Child-rearing	79	46	19
Personal Hygiene	78	44	22
Medications (prescriptions)	77	44	23
Cigarette smoking	74	53	17
Pregnancy/Pre-Natal care	65	54	25
Family Planning/Birth Control	65	60	21
Would you be interested in:			
Health Education classes?	171	80	29
Home-study learning packets about health?	167	73	40
Books on health issues?	159	86	35
Pamphlets on health issues?	149	86	45
Videos on health issues?	148	93	39
Studying health in your current program?	147	92	41
Health Fair?	116	114	50
Other_____	50	93	137
Nursing Classes			
Reading Material			

Other Issues: AIDS; Arthritis; Asthma; Blood pressure; Cancer; Career skills; Children's health; Cholesterol; Clothing; Diabetes; Disease prevention; Emotional stability/confidence; Enjoying work with others; Environment; Eyes; "Golden Hair Syndrome"; Health and safety; Heart disease; Hepatitis; Infections; Mental health; Sex and adolescents; Time management; Sexually transmitted diseases; Working with patients.

APPENDIX B: ACKNOWLEDGMENTS

We would like to thank the following individuals, in addition to all the students who completed the survey, for their contribution to this health education curriculum:

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We would also like to extend our appreciation to the following individuals for their support, assistance, and suggestions on this project:

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